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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,109	10/31/2003	Edward C. Gunzel	FA/261	1873

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EXAMINER	
COLE, ELIZABETH M	

ART UNIT	PAPER NUMBER
1794	

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10/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/699,109	GUNZEL ET AL.	
	Examiner	Art Unit	
	Elizabeth M. Cole	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-86* is/are pending in the application.

4a) Of the above claim(s) *39-81* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38 and 82-86* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/21/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-8, 16-32, 82-86 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2001/0006173 to Rock et al in view of Caird et al, U.S. Patent NO. 3,768,156. Rock discloses a fabric having a conductive cable attached to it. The fabric can be a knitted, woven or nonwoven material and can comprise multiple layers. The fabric can be hydrophobic or hydrophilic. See paragraph 0020. The conductive cable can be covered by a barrier layer which corresponds to the claimed tape. The barrier layer can comprise multiple layers. The layers can comprise polyurethane and PTFE among other materials. The barrier layer can be adhesively bonded to the fabric layer and overlies the conductive cable. See figure 12 as well as paragraph 0031. With regard to the limitations set forth in claims 22-26, no structure is set forth for the claimed articles. Therefore, these statements have been considered to be statements of intended use. Rock et al differs from the claimed invention because although Rock et al does disclose employing multiple fabric layers it does not explicitly state that the cable extends across two of the layers. Caird et al teaches that conductive cables such as electrodes can be incorporated into garments such as jacket so that the cable extends across two fabric panels. See figure 3 as well as col. 3, line 53 – col. 4, line 41. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

have formed the jacket of Rock so that the cable extended across two fabric panels, motivated by the teaching of Caird that this was a known method of forming a garment such as a jacket which comprised conductive elements and because the more panels that are used in jackets the better the fit of the jacket. With regard to the limitations regarding the conductivity of the cable, since the cables in Rock are used as heating elements, it would have been obvious to have selected the appropriate conductivity and resistance in the cables in order to produce a material having the desired properties. With regard to the limitations regarding durability after washing, since Rock appears to disclose the same structure, presumably the material of Rock would meet these limitations.

3. Claims 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rock et al in view of Caird et al, U.S. Patent NO. 3,768,156as applied to claims above, and further in view of Cordia et al, U.S. Patent No. 5,236,765. Rock discloses a heatable fabric as set forth above. Rock differs from the claimed invention because Rock et al does not disclose the particular types of adhesives which can be used to bond the barrier layer which overlies the cable to the fabric layer. Cordia teaches at col. 9, lines 4-16, that pressure sensitive, hot melt or curable adhesives can be used to bond heating elements to fabric layers. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to have employed the particular adhesives set forth by Cordia to bond the barrier tape of Rock to the fabric layer, since Cordia teaches that such adhesives are suitable for use to bond heating elements to fabric layers.

4. Claims 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rock et al in view of Caird et al as applied to claims above, and further in view of Parker, U.S. Patent No. 5,658,164. Rock discloses a heatable fabric as set forth above. Rock differs from the claimed invention because Rock does not disclose employing a micro ribbon as the conductive cable. Parker teaches that micro-ribbon cables which comprise an insulation layer can be used to form electrical connections. Therefore, it would have been obvious to one of ordinary skill in the art at the time to have employed a micro-ribbon as the cable in Rock. One of ordinary skill in the art would have been motivated to employ a micro ribbon cable because Parker teaches that such cables are rugged and durable. See col. 4, lines 40-45.

5. Applicant's arguments filed 8/21/07 have been fully considered but they are not persuasive. Applicant argues that Caird does not show the heating element extending across panels. However, at col. 3, line 53-col. 4, line 41, Caird clearly teaches and shows that the electrode 48 can from fabric panel 41a to fabric panel 43A.

6. Applicant argues that the fabric strips of Caird are not a garment or fabric panel. However, Caird clearly teaches fabric panels and calls them fabric panels. Caird teaches extending electrode 48 across two panels. Therefore, Caird teaches this feature.

7. Applicant argues that Rock and Caird do not teach incorporating the elements into a garment directly without first forming a composite and then attaching that to the garment. However, the claims do not preclude a structure which is preassembled and

then formed into a garment. Both Caird and Rock teach garments and incorporating the heating elements into garments.

8. Applicant argues that the barrier of Rock dos not correspond to the claimed tape because Rock does not teach the adhesive layer. However, the instant claims recite a tape comprising an adhesive that covers and adheres to the upper cable surface of the length of cable, wherein the adhesive extends beyond the cable side surfaces onto the textile panels and adheres to the textile panels. Rock teaches a fabric article 10 which is combined with a barrier layer 102, wherein the barrier layer is attached to the fabric layer by lamination or with an adhesive. See paragraph 0030. The barrier layer overlies the conductive cable. Figure 14 shows that the barrier layer extends over the cable and contacts the fabric. Applicant argues that this statement is conclusory. However, the reference teaches adhesively bonding the barrier layer so that it overlies the cable and is bonded to the fabric. Therefore, the barrier layer corresponds to a tape layer. The structure claimed is the same as the structure of Rock, whether it is called a barrier layer or a tape layer. Figure 14 shows the barrier layer overlying the cable. Rock teaches attaching the barrier layer by means of an adhesive or by lamination. Further, Rock teaches in paragraph 0005 that the cable is disposed and secured between the protective layer and the first surface. The cable can be attached the first surface of the fabric by adhesion of the cable upon the first surface. Therefore, Rock clearly teaches that the cable can be adhesively bonded to the fabric and that the barrier layer can use an adhesive to bond the barrier layer over the cable to the fabric. Further, Rock teaches that the adhesive 104 is "typically" applied in spots, line or other

discrete regions, which implies that the adhesive 104 can also be applied continuously. Rock contains no teaching or suggestion that care must be used to ensure that the adhesive does not contact the cable 16. Rock teaches that the cable can be adhesively bonded to the fabric. Rock does not teach that the cable is damaged or destroyed if any adhesive contacts the cable. Rock clearly teaches and shows adhesive 104 which is applied on both sides of the cable 16 and teaches using the adhesive tape of Lumb as the barrier layer. Also, with regard to the difference between adhering and associating, it is noted that in Rock, the cables 16 are already bonded to the underlying fabric layer, which is why Rock refers to adhering the fabric layer and barrier layer, rather than adhering the cable and the barrier layer. Finally, the reference teaches employing an adhesive layer on a barrier layer, (i.e., a tape), to cover the cable, where the adhesive layer and barrier layer are adhered to the fabric. The reference is absolutely silent as to preventing the adhesive from touching the cable. Therefore it is not a strained interpretation of the reference to state that the adhesive would overlie the cable and extend to the fabric layer.

9. Applicant argues that Cordia does not teach bonding the heating elements to the fabric layers and thus does not cure the deficiencies of Rock. However, as set forth, Rock is not deficient. Further, with regard to Cordia, it is relied on for the teaching of the particular types of adhesives which are useful for bonding heating elements to fabric layers. The cover layer can comprise a fabric layer and it is bonded to the heating element. Therefore, Cordia does teach bonding heating elements to fabrics by means of the particular adhesives taught in column 9. Therefore, this rejection is maintained.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/

Primary Examiner, Art Unit 1794

e.m.c